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**D436-16**

## **Accessible over-the-road buses**

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***Accessible over-the-road buses***



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# Preface

This is the second edition of CSA D436, *Accessible over-the-road buses*. It supersedes the previous edition published in 2003.

This Standard is designed to complement CSA D435, which is applicable to transit (cross-city) buses. It also is intended to be used in conjunction with standards issued by Transport Canada under the federal *Motor Vehicle Safety Regulations*.

This Standard provides requirements specific to vehicles used by over-the-road-bus (OTRB) operators in their routine services. It is intended that this Standard be used to enable OTRB operators to integrate persons with disabilities into their normal services.

The following are the significant changes made to this edition:

- a) design requirements for mobility aid securement and occupant restraint (MASOR) systems (Clause 7.3.4) have been modified;
- b) Clause 8 has been rewritten to bring the requirements for mobility aid lifts into harmony with the requirements of CSA D409 and with FMVSS 403 and 404;
- c) requirements for the positioning of MASOR systems (Figure 3) have been modified; and
- d) requirements for the anchor points for MASOR systems (Figure 4) have been modified.

This Standard was prepared by the Technical Committee on Motor Vehicles for Transportation of Persons with Physical Disabilities, under the jurisdiction of the Strategic Steering Committee on Mechanical Industrial Equipment Safety, and has been formally approved by the Technical Committee.

## Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
- 3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
- 4) *To submit a request for interpretation of this Standard, please send the following information to [inquiries@csagroup.org](mailto:inquiries@csagroup.org) and include “Request for interpretation” in the subject line:*
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  - b) *provide an explanation of circumstances surrounding the actual field condition; and*
  - c) *where possible, phrase the request in such a way that a specific “yes” or “no” answer will address the issue.*

*Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are available on the Current Standards Activities page at [standardsactivities.csa.ca](http://standardsactivities.csa.ca).*
- 5) *This Standard is subject to review five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to [inquiries@csagroup.org](mailto:inquiries@csagroup.org) and include “Proposal for change” in the subject line:*
  - a) *Standard designation (number);*
  - b) *relevant clause, table, and/or figure number;*
  - c) *wording of the proposed change; and*
  - d) *rationale for the change.*

# D436-16

## ***Accessible over-the-road buses***

### **0 Introduction**

#### **0.1**

This Standard sets forth the minimum features necessary to accommodate the boarding, transportation, and alighting phases of a trip taken on an accessible over-the-road bus (OTRB).

This Standard incorporates the principle of current minimum requirements in recognition of

- a) the masses of vehicles and the operating speeds [general design speeds exceeding 80 km/h (50 mph)] covered by this Standard;
- b) the need to preserve the fluidity of passenger boarding and alighting;
- c) the importance of continuing the widespread acquisition of accessible OTRBs;
- d) the need to further enhance mobility options for persons with mobility impairments;
- e) the many responsibilities of the vehicle operator; and
- f) the safety record of the OTRB industry.

This Standard is primarily based on the requirements of US Federal regulations 49 CFR, Part 38, Subpart G, *Over-the-Road Buses and Systems*, and FMVSS 403/404, as operators of OTRBs providing cross-border service into the US are required to comply with these requirements.

#### **0.2**

This Standard does not presume to cover all possible situations that can be encountered in day-to-day operations. Care should always be taken to ensure that vehicles acquired serve the specific needs and operating conditions encountered by the OTRB operator and its customers.

### **1 Scope**

#### **1.1**

This Standard applies to accessible over-the-road buses (OTRBs), as defined in Clause 3.

#### **1.2**

The values given in SI units are the units of record for the purposes of this Standard. The values given in parentheses are for information and comparison only.

#### **1.3**

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the Standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

## 2 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below.

### **CSA Group**

B651-12

*Accessible design for the built environment*

D409-16

*Motor vehicles for the transportation of persons with physical disabilities*

D435-16

*Accessible transit buses*

### **ASTM International**

D412-15

*Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers — Tension*

D1056-14

*Standard Specification for Flexible Cellular Materials — Sponge or Expanded Rubber*

D1667-05

*Standard Specification for Flexible Cellular Materials — Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam)*

D2047-11

*Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine*

D3574-11

*Standard Test Methods for Flexible Cellular Materials — Slab, Bonded, and Molded Urethane Foams*

### **Government of Canada**

*Motor Vehicle Safety Act, 1993, c.16*